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EMPLOYMENT TRENDS IN MONTANA: 1950-1968

Paul E. Polzin

BUREAU OF BUSINESS AND ECONOMIC RESEARCH missoula ● montana

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Project No. Montana P-31

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University of Montana
School of Business Administration
Bureau of Business and Economic Research

1970

I. INTRODUCTION

Employment in Montana rose from 201,800 in 1950 to 229,000 in 1968, or at an average annual increase of .7 of 1 percent.[1] The increase in employment did not occur evenly over time nor throughout all sectors of the economy. The growth was greater in some years than in others and, in a few instances, there were actual decreases. A number of industries displayed a robust growth while others stagnated or declined. In other words, the overall changes for the state disguise the extreme, and sometimes countervailing, forces which combined to produce the state totals. This paper will examine employment in Montana for each of the 19 years mentioned above and for all of the 35 important industries in this state.

The significance of the changes in Montana cannot be evaluated unless they are compared to what is happening in other states and regions. Consequently, the performance and changes in composition of the major industry groups in Montana will be compared to their counterparts in the nation as

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1. Throughout this paper, employment will refer to the sum of agricultural and nonagricultural wage and salary workers plus self-employed and family workers in agriculture. The major exclusions are nonagricultural self-employed, unpaid family, and private household workers. Total employment in these categories may be estimated but it cannot be allocated to individual industries.

The employment series were constructed in the summer of 1969 using the latest data available at that time. Later revisions, especially pertaining to 1967 and 1968, were not incorporated. Also, employment reported in this paper may differ from that in other Montana Economic Study publications because of differences in coverage and definitions.

a whole and the Rocky Mountain states. The differences between Montana and these regions may then be evaluated.

II. TOTAL EMPLOYMENT

A. Jobs Gained and Jobs Lost

Employment in Montana increased by 27,200 from 1950 to 1968--an average increase of 1,400 jobs per year. This does not imply that the economy produced only 1,400 new jobs each year since the growth of total employment in the state is dependent not only on the number of new jobs gained but also the rate at which old jobs are lost. A more revealing statement would be that, over the 19-year period, the number of new jobs created exceeded existing jobs eliminated by an average of 1,400 per year.

Figure 1 shows the trends in jobs gained, jobs lost, and the net change of employment in Montana from 1950 to 1968. It is interesting to note the close coincidence of peaks and troughs in jobs gained and jobs lost. In other words, the erratic pattern displayed by the net change in employment is due to complementary changes in jobs gained and jobs lost. An increase in new jobs has usually been associated with a decrease in the number of existing jobs lost. Apparently, the individual labor markets are not isolated from each other but respond, perhaps as a result of a common stimulus, in a complementary manner.

The largest net increases in employment occurred in 1956, 1962, and 1966. The major troughs occurred in 1954, 1957, 1961, and 1964. Later in this paper each industry will be analyzed individually, but a preview may be obtained by examining each of these turning points in total state employment.

The years of robust growth in total employment, 1956, 1962, and 1966, have much in common. Agricultural employment, which declined in every other year, showed a net increase in each of these three periods. Employment in

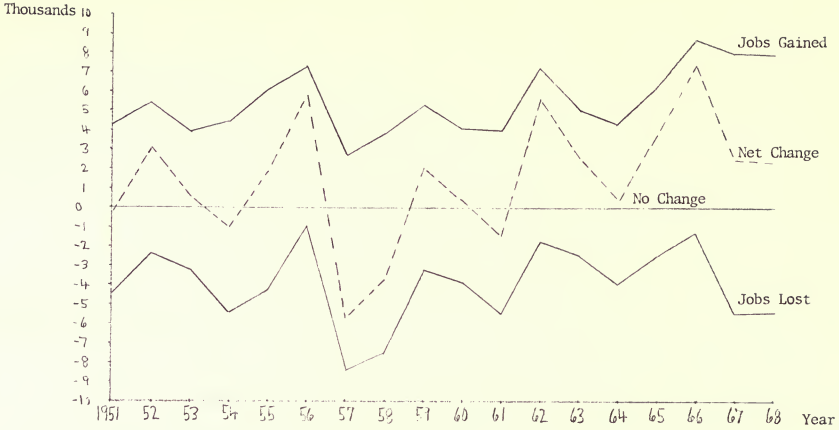

Figure 1. Montana: Jobs Gained and Jobs Lost

mining, which usually declined, increased in both 1956 and 1966. Also, contract construction, whose growth rate was sporadic over the entire period, experienced its largest one-year increases in 1956 and 1962. Among the growing industries, retail trade and services had well above average increases in employment during 1956 and 1966. The normal large growth of government hiring, especially at the state and local levels, combined with the exceptional increases to make expansion in total employment particularly large in these years.

Unlike the peaks, the employment troughs have little in common. The declines of 1954 and 1961 were primarily due to unusually large increases in jobs lost, with little or no change in the number of jobs gained. The years 1957 and 1964 saw simultaneous increases in jobs lost and declines in jobs gained. All four troughs had unusually large declines in agricultural employment. The mining industry had large decreases in 1954 and 1957. Also, the greatest single-year losses in railroad employment occurred in these 1954, 1957, and 1966. However, the difference between the 1954 and 1961 declines and those of 1957 and 1964 is that industries such as durable goods manufacturing had actual decreases in employment in the latter two years but only less than average increases in the former.

A combination of factors lead to the peaks and troughs in the net change of employment in Montana. No one industry or cause may be pinpointed. A slowing of the rate of growth in one industry may combine with large declines in others to bring about a net decrease in total employment. Also, brief spurts by a normally stagnant or declining industry, occurring at a time when others are experiencing a slightly above normal prosperity, may be enough to result in a large increase for the state. Finally, the regular alternation of peaks and troughs reinforces the notion that

employment growth does not happen evenly over time. However, the close correlation between the jobs gained and jobs lost suggests that influences are felt not in only one sector but throughout the economy.

B. Industrial Composition of Montana Employment

Between 1950 and 1968 the structure of Montana employment changed dramatically. The major developments saw the government displace agriculture as the largest single employer in the state. Less dramatic, but equally significant was the rise of the service sector and the relative declines in mining and transportation, communication, and utilities. The relative importance of trade, manufacturing, finance, insurance, and real estate industries increased only slightly.

Figure 2 shows the trends in relative employment of the major industrial groups in Montana. The rapid and persistent relative decline in agriculture stands out. In 1950, 26 percent of the state's labor force was employed in agriculture. By 1968, the proportion of total employment in this industry had dropped to less than 15 percent. In an almost mirror image, government employment grew from 14 percent of the total in 1950 to 24 percent in 1968. From 1950 to 1956, the relative importance of government remained approximately constant, but since 1957, the growth rate of this sector has exceeded by far that of any other industry in the state.

The share of mining in total employment declined from a maximum of 6 percent in 1955 and 1956 to 2 percent in 1968. The greatest relative decreases occurred between 1956 and 1959 and again in 1967. The service industry experienced a slow but consistent growth in its share of total employment from 1950 to 1968. This increase, from 9.5 percent to over 13 percent, will probably continue into the future.

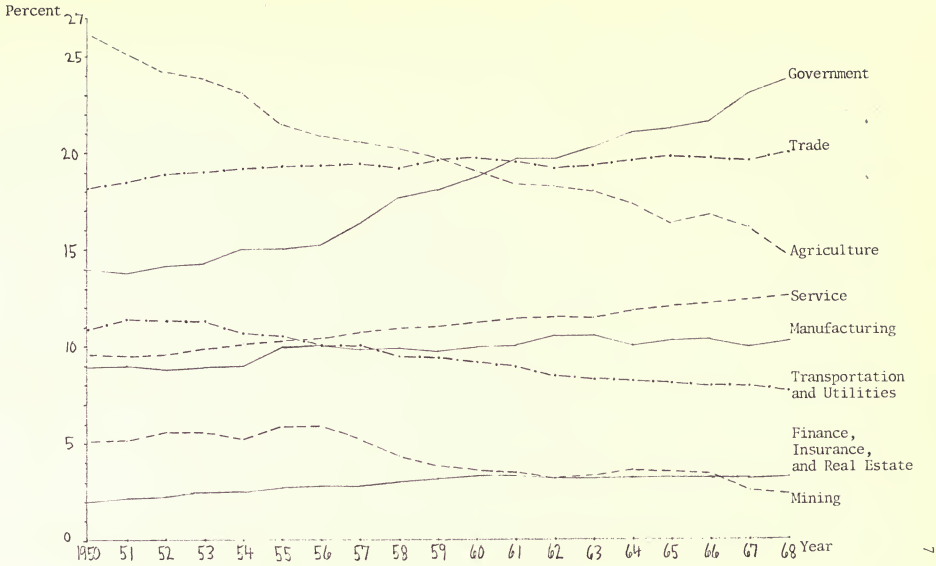

Figure 2. Montana Industrial Composition

The employment shares of finance, insurance and real estate, manufacturing, and trade all increased moderately over the 19-year period. In 1955, relative importance of manufacturing increased from 9 to 10 percent, and has since oscillated about this level. Trade, both wholesale and retail, increased from 18 to 20 percent of the total over the 19 years, and the share of finance, insurance and real estate increased from 2 to 3 percent. However, transportation, communication, and public utilities decreased in importance because of the decline in railroad employment.

In summary, trade, manufacturing, finance, insurance and real estate, and especially the government and service sectors, increased their share of total employment in Montana between 1950 and 1968. The relative increases in these industries came at the expense of agriculture, which lost its dominant position in the state, mining, and transportation, communication, and public utilities.

C. Employment Growth in Montana Relative to the United States and the Rocky Mountain Region

Evaluation of the performance of the Montana economy is made more real by comparisons with other regions. Equivalent measures of total employment for the United States and the Rocky Mountain states have been calculated and are presented, along with Montana data, in figure 3.[2] The data are plotted on logarithmic (ratio) scales, so that equal slopes denote equivalent percentage rates of change.

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2. The Rocky Mountain states consist of Colorado, Utah, Wyoming, Montana, and Idaho. Employment data for this aggregate could be computed only through 1967. Thus, all references to this region will be for the 18-year period ending in 1967.

Figure 3. Total Employment

From 1950 to 1968 the average annual rate of growth for total employment in Montana was .7 of 1 percent. The corresponding average annual growth rates for the United States and the Rocky Mountain region were 1.7 and 2.8 percent, respectively. In addition, Montana's rates of growth for individual years in the period are generally lower than those for the nation and for the Rocky Mountain states.

The persistent deficiency in Montana's rate of growth has led to an ever-widening gap in the time trends of employment. The effect of a low rate of growth in one period is compounded and reflected in the statistics for years to come. For example, figure 3 shows that in 1951 a gap was created between employment in Montana and the United States, due to our state's lower rate of growth. Between 1951 and 1956 the growth rates for Montana and the nation were approximately equal. Yet, we were unable to make up the deficiency incurred in the first year. Since 1959 Montana's rate of growth in total employment has consistently been below those of the United States and the Rocky Mountain region. Consequently, our present position is not of recent origin but has resulted from slow growth being piled upon the cumulative effects of slow growth in the past.

The cyclical pattern of Montana's employment is not dissimilar to those of the United States and the Rocky Mountain states. Beginning in 1954, all three areas began their recovery from the post-Korean recession. During the next two years, Montana's growth rate was slightly larger than the others, but reached a peak in 1956 and began to decline in 1957, a year earlier than the nation and the Rocky Mountain states. The period 1959 to 1963 was one of sustained high rates of growth for the Rocky Mountain states. The United States and Montana both experienced slightly slower growth, and employment declined in 1961 reflecting the recession

that ended that year. All three regions experienced a slowdown in 1964 with Montana employment barely holding steady. Rapid growth was experienced by all three regions during 1965 and 1966, but again during 1967 and 1968 Montana's growth rate lagged. The similarity between the cyclical patterns of growth rates for Montana and the nation indicates that the periods of rapid growth and decline shown in figures 1 and 3 reflected responses to national economic developments rather than developments unique to Montana.

The evidence also suggests, on the other hand, that the relatively poor performance of Montana over the recent decades was in large measure independent of cyclical influences. In general, periods of prosperity in Montana coincided with equivalent conditions in the nation as a whole; the real culprit appears to be the cumulative effect of a state growth rate consistently lower than the United States and the Rocky Mountain region. The remaining sections of this paper will be concerned with a detailed industry-by-industry study of Montana's low growth rates in employment.

III. EMPLOYMENT BY INDUSTRY

A. Agriculture

Montana agricultural employment has declined dramatically since World War II. In 1950, almost 53,000 Montanans worked on farms. By 1968, this number had fallen to only 34,000. Agriculture dropped from the state's largest to its third largest employer, behind government and trade. But agriculture still comprises the economic backbone of many regions of Montana.

Figure 6 shows that the decline of agricultural employment since 1950 has been persistent--the only interruptions of the trend occurred in 1956, 1962, and 1966. The largest decreases occurred in 1951, 1955, 1957, 1961, and 1967.

The three years in which employment increased, 1956, 1962, and 1966, correspond to the three largest gains in gross farm income, as is shown by table 1.[3] However, the large declines in agricultural employment do not appear to be associated with changes in either gross or net farm income. Some, such as in 1961, coincide with decreases in both measures of income while others, (for example, 1951) are correlated with sizable increases. Thus, large increases in farm income seem to be positively correlated with agricultural employment, but declines in farm income do not appear to have an immediate impact on numbers employed.

The decline of agricultural employment is, of course, a national phenomenon, as figure 6 shows. As a matter of fact, agricultural employment has been declining at a much faster rate in the nation as a whole than in either Montana or the Rocky Mountain region.

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3. 1961 was a drought year for Montana agriculture. The 1962 increase in employment did not make up for 1961 exodus. But, the 1962 gross farm income was far above that of previous years.

TABLE 1

Realized Gross Farm Income and
Total Net Farm Income, Montana

	Realized Gross Farm Income	Total Net Farm Income
	(millions)	(millions)
1950	383.9	228.9
1951	472.4	244.0
1952	434.0	190.2
1953	403.6	198.9
1954	418.3	167.0
1955	401.6	185.7
1956	452.1	169.6
1957	440.4	178.4
1958	482.8	220.3
1959	468.3	139.9
1960	448.2	149.4
1961	405.1	86.2
1962	459.3	239.2
1963	472.3	185.8
1964	454.0	142.3
1965	500.1	177.7
1966	600.5	218.2
1967	585.9	195.3
1968	613.4	181.4

Source: U.S. Department of Agriculture, Economic Research Service, Farm Income, State Estimates 1949-1968, A Supplement to the July 1969 Farm Income Situation, table 6.

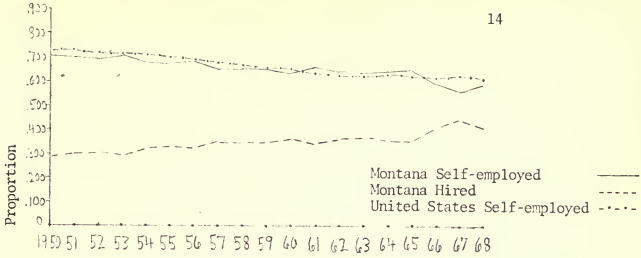
Proportion
Montana Self-employed
Montana Hired
United States Self-employed
1950 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68

Figure 4. Montana Agriculture Composition

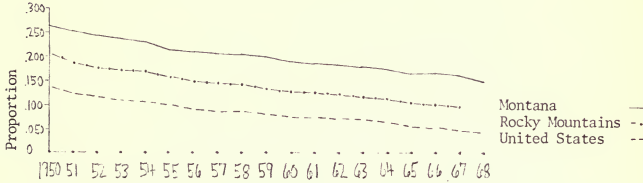

Figure 5. Agricultural Employment as a Proportion of Total Employment

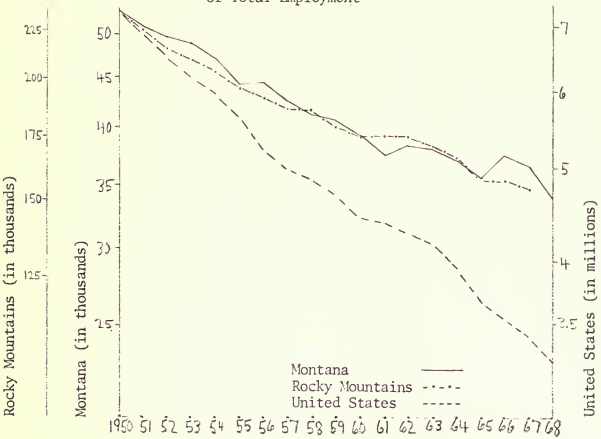
Rocky Mountains (in thousands)
Montana (in thousands)
United States (in millions)
Montana
Rocky Mountains
United States
1950 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68

Figure 6. Total Agricultural Employment

Figure 5 shows that the declining relative importance of agricultural employment in Montana is paralleled in the Rocky Mountain states, and the United States as a whole. However, agriculture still remains relatively much more important in Montana than in the other regions.

The absolute and relative decline of Montana agricultural employment has been accompanied by a change in the character of employment in this industry. Figure 4 shows that self-employed and unpaid family workers comprise a decreasing proportion of agricultural employment. In fact, from 1950 to 1968 the number of hired workers in Montana agriculture has remained almost constant. Thus, the decline consisted mostly of self-employed farmers. This change in composition suggests that there is a consolidation of units in agriculture. Again, as the chart shows, this phenomenon is not peculiar to Montana.

In summary, agriculture has been and will continue to be one of the dominant industries in Montana. Its importance in this state has declined in both absolute and relative terms but the state continues to have a greater share of total employment in agriculture than either the nation or the Rocky Mountain states. In both Montana and the comparison regions the reductions occur primarily among the self-employed.

B. Manufacturing

Manufacturing has often been suggested as the best source of potential economic growth for Montana. Figure 9 demonstrates that the average rate of growth in manufacturing employment in Montana since the early 1950s was greater than in the United States. However, it was substantially lower than the growth rate for the Rocky Mountain states.

The relatively high average rate of growth in Montana manufacturing employment (compared with the nation) is due primarily to exceptional increases during 1955 and 1956, 1962 and 1963. Between 1954 and 1956, the Anaconda Aluminum Company opened its aluminum plant in Columbia Falls, and the lumber and wood products industry increased production in response to the national construction boom.[4] These two factors account for almost the entire increase of 2,900 in Montana manufacturing employment between 1954 and 1956. Subsequent softening in the construction sector caused most of the gains in the lumber and wood products industry to be lost in 1957. The other exceptional increase, between 1961 and 1963, was due to the addition of over 1,000 workers assigned to on-site assembly of missiles along the High Line. The sharp decline in 1964 reflected the completion of this project. The more moderate increases of manufacturing employment in 1965 and 1966 resulted from increased refining of mineral ores and the response of the lumber industry to increased national demand.[5]

Any notion that the moderately favorable average rate of growth in Montana manufacturing reflects rapid industrialization of the state is dispelled by figure 8. Manufacturing continues to account for a much smaller share of total employment in Montana than in either the Rocky Mountain states or the nation as a whole. In fact, since 1955, its growth has only slightly exceeded the overall growth in total state

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4. Montana Business, vol. 8, no. 2 (Missoula, Montana: Bureau of Business and Economic Research, University of Montana, February 1956), p. 1.

5. Maxine Johnson, "The Business Outlook," Montana Business Quarterly, vol. 3, no. 1 (Missoula, Montana: Bureau of Business and Economic Research, University of Montana, Winter 1965), p. 11.

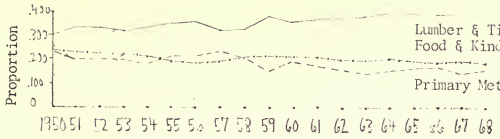

Figure 7. Montana Manufacturing Composition

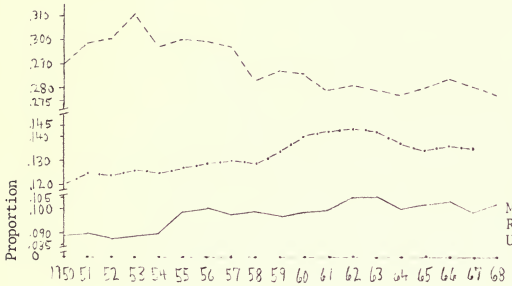

Figure 8. Manufacturing Employment as a Proportion of Total Employment

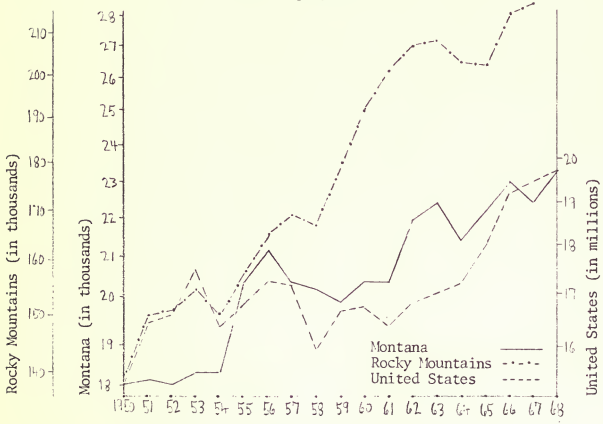

Figure 9. Total Manufacturing Employment

employment, and by 1968 manufacturing employment was only slightly above 10 percent of the total. Between 1950 and 1968 the share of manufacturing in total employment increased in the Rocky Mountain region, but decreased considerably for the nation as a whole. The favorable comparison between average rates of growth of manufacturing employment in Montana and the United States since the early 1950s results from contrasting a static situation with one of relative decline!

Lumber and wood products, primary metal refining, and food and kindred products are the significant manufacturing classifications in Montana.[6] Of these, lumber and wood products has by far the best record of employment growth. Its average annual rate of increase between 1950 and 1968, 3.2 percent, far exceeds that of primary metal refining and food and kindred products, .5 and .2 percent respectively. In fact, manufacturing employment increased by 5.3 thousand between 1950 and 1968--almost all of it occurring in the lumber and wood products category. The performance of this classification is particularly noteworthy because nationally the lumber and wood products industry has shown an absolute decrease in employment.

The volativity of employment in primary metal refining is closely related to developments in the national and international markets for primary metals. However, this category has not experienced significant secular growth and has accounted for a decreasing share of total manufacturing employment in the state.

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6. Employment data is given in Appendix A for petroleum refining, printing and publishing, and other manufacturing, which includes the missile assembly, but is not graphed.

Employment in manufacturing of food and kindred products, which includes meat slaughtering and packing, dairies, flour mills, and the like, did not grow significantly between 1950 and 1968. This suggests that there has been no improvement in Montana's position as a processor of agricultural raw materials.

Summing up, the overall growth rate of manufacturing in Montana compares favorably with that of the United States. But, the absolute size of this industry remains small and the growth traces largely to sporadic events. Lumber and wood products is the only classification which has shown consistent growth.

C. Mining

The mining industry has a long and colorful tradition in Montana, largely stemming from the concentration of primary metals in the western part of the state. But in recent decades the development of oil and natural gas deposits east of the divide has provided a significant source of employment.

Figure 12 shows that, after reaching a peak in 1956, mining employment experienced a large and almost continuous decline. This decrease has occurred exclusively in the metal mining classification and, even more specifically, may be traced to events in and around Butte. The oil and natural gas classification grew significantly in the early fifties. Since then, the level of employment in this and coal and quarrying has remained unchanged.[7]

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7. This classification includes both coal and nonmetallic mining. Employment in coal extraction has decreased while nonmetallic mining has increased.

The peak of mining employment in 1956 coincided with the end of a period of increasing production in response to a buoyant national and international market for primary metals. A weakening of demand in 1957 and 1958, resulted in decreased production.[8] Table 2 shows that copper production recovered but, as is demonstrated by figure 12, mining employment continued to decrease. Much of the apparent contradiction between the increases in output and decreases in employment can be traced to the introduction of open-pit mining in Butte.[9] This method requires much less labor than the use of shafts. Thus, the increase in copper production from 1959 to 1961 was accomplished with the use of even less labor. Apparently, the adjustment was completed by the early 1960s, and further increases required an enlarged labor force. The 1967-1968 decline in both employment and copper production was at least partially caused by the crippling mineworkers strike during this period.

The similarities in both short-run and long-run changes in mining employment in the United States, Montana, and the Rocky Mountain states suggest that all three regions are responding to the same general set of influences. National and international market conditions determine the short-run fluctuations, but the long-run trend is toward labor-saving methods and lower levels of employment.

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8. Edward J. Chambers, "The Business Situation," Montana Business Review, vol. 10, no. 7 (Missoula, Montana: Bureau of Business and Economic Research, University of Montana, July 1958), p. 9.

9. U.S. Department of the Interior, Bureau of Mines, Minerals Yearbook 1957, vol. 2 (Washington, D.C.: U.S. Government Printing Office, 1959), p. 634.

TABLE 2

Index of Montana Copper Production
(Daily Average Production 1957-1959 = 100)

1950	57.12
1951	59.95
1952	64.50
1953	81.04
1954	80.11
1955	85.12
1956	100.67
1957	95.68
1958	94.57
1959	109.74
1960	111.85
1961	108.92
1962	98.20
1963	83.29
1964	108.83
1965	117.97
1966	136.00
1967	128.79
1968	109.82

Source: Missoula, Montana: Bureau of Business and Economic Research, University of Montana.

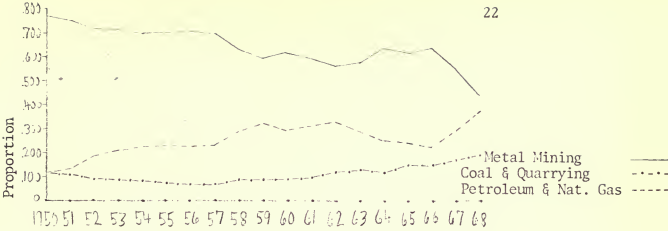

Figure 10. Montana Mining Composition

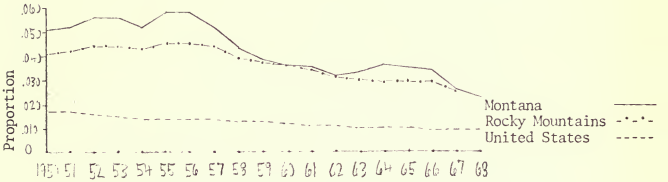

Figure 11. Mining Employment as a Proportion of Total Employment

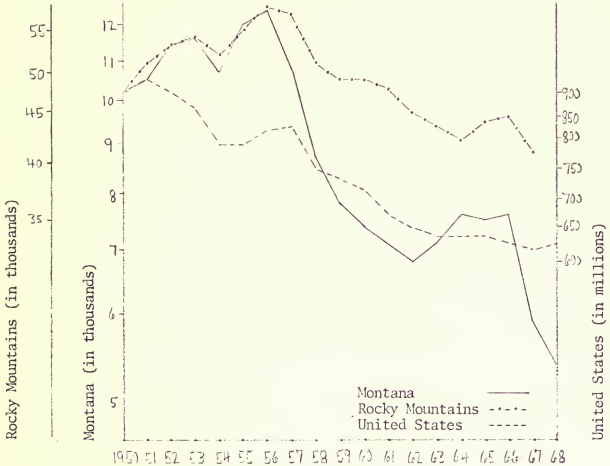

Figure 12. Total Mining Employment

The relative decline of mining in all three regions is pictures in figure 11. As could be expected, the relative shares of total employment in mining for the Rocky Mountain region continues to be larger than for the nation.

The decline of metal mining has changed the character of employment in Montana's mining industry as a whole. Should the trends pictured in figure 10 continue, petroleum and natural gas will soon be the most important classification in this industry.[10] This change in relative importance is not due to their unusual growth, but to the large absolute decline in employment in the metal mining classification.

Overall employment in mining has declined, both absolutely and relatively, as a result of the trend in primary metals. Total employment in nonmetal extraction has shown no secular growth. The employment decline in metal mining, which can be blamed on labor-saving methods rather than reduction in output, parallels the trends in the Rocky Mountain states and the nation as a whole.

D. Construction

The performance of the construction industry is often used as an indicator of the health of the entire economy. A growing region needs an ever-increasing stock of plant and commercial facilities along with housing for its workers. However, because of the cyclical nature of the industry, the pace of growth in construction employment is uneven.

Figure 15 shows that the overall growth rate of employment in the Montana construction industry is substantially below that for the United

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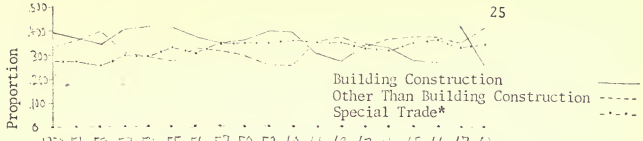
10. According to recent news releases, employment and copper production in Butte has increased. Thus, the trend may have already been reversed.

States and the Rocky Mountain region. Also, construction employment in Montana displays more year-to-year variation than either comparison region.

Lack of data other than employment on construction activity makes it difficult to analyze the course of construction employment in Montana. In fact, employment in this industry is often, itself, used as an index of construction activity. Table 3 presents three fragments of information on construction activity in Montana.

The data on Federal Aid Highway Projects indicates the importance of interstate and other federal highway construction in the state. Beginning in 1958, this type of construction spending entered a period of growth which peaked in 1965 and then declined mildly. However, since this series does not display cyclical variations, the peaks and troughs of total construction employment cannot be assigned to variations in the building of highways. If nothing else changed, the steady growth of Federal-Aid Highway Projects would have caused a slight overall upward trend in Montana construction employment.

The value of building permits displays a cyclical variation similar to that of construction employment and also shows a slight upward trend. The peaks of construction employment occurring in 1956, 1959, and 1965 are mirrored in the value of building permits. However, the 1962 peak in employment is not reflected in that year's permit figure. The upward trend of this series may be caused by the increased cost of construction rather than actual construction activity, or it may be because the Federal Reserve Bank of Minneapolis continually improves its data sources, making the figures reflect the better coverage in the later years.



*Special trade consists of plumbing, electrical work, and the like.

Figure 13. Montana Contract Construction Composition

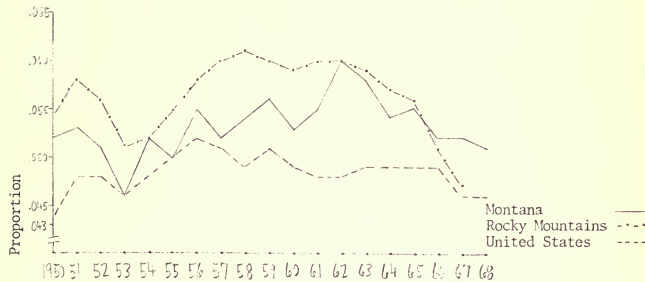


Figure 14. Contract Construction Employment as a Proportion of Total Employment

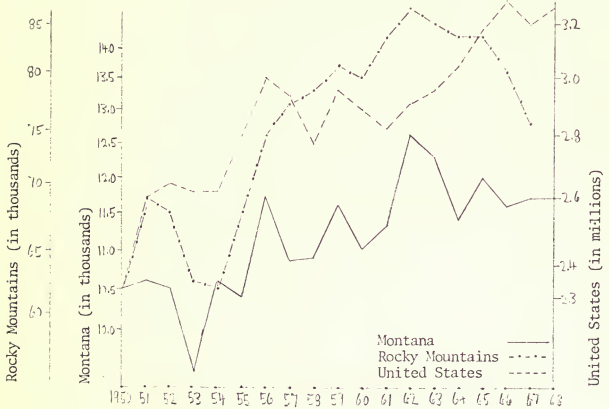


Figure 15. Total Contract Construction Employment

TABLE 3

Construction in Montana

	Montana Federal Aid Highway Projects Completed and Under Construction[a]	Value of Building Permits, Selected Montana Cities	Engineering Construction Contracts Awarded, Montana[b]	
	(1) (Thousands of Dollars)	(2) (Thousands of Dollars)	Public Works (3) (Thousands of Dollars)	Private Industrial and Commercial Building Contracts (4) (Thousands of Dollars)
1950	NA	NA	30,980	3,481
1951	24,916	NA	22,873	10,362
1952	27,208	NA	32,267	48,486
1953	31,783	NA	49,951	20,778
1954	33,749	NA	25,990	2,716
1955	36,691	35,887	34,252	6,516
1956	44,877	36,889	47,741	19,359
1957	59,479	31,811	46,988	6,648
1958	74,949	34,777	70,647	4,545
1959	93,352	45,387	44,670	14,029
1960	112,798	40,664	52,572	2,955

Sources: Column 1: U.S. Department of Commerce, Bureau of the Census, "Federal Aid Highway Projects--States," Statistical Abstract of the United States.

Column 2: Federal Reserve Bank of Minneapolis, Building Permits, Annual Summary.

Columns 3 and 4: U.S. Department of Commerce, Bureau of the Census, "Engineering Construction Contracts Awarded--Value, by Type, by States," Statistical Abstract of the United States.

NA = Data not available

[a]Converted from fiscal year.

[b]Date contract awarded, not construction in progress.

TABLE 3 (Continued)

	Montana Federal Aid Highway Projects Completed and Under Construction[a]	Value of Building Permits, Selected Montana Cities	Engineering Construction Contracts Awarded, Montana[b]	
			Public Works	Private Industrial and Commercial Building Contracts
	(1) (Thousands of Dollars)	(2) (Thousands of Dollars)	(3) (Thousands of Dollars)	(4) (Thousands of Dollars)
1961	121,850	38,554	116,953	15,939
1962	137,550	33,300	69,995	40,089
1963	163,850	43,147	NA	NA
1964	190,450	39,336	NA	NA
1965	209,400	46,061	NA	NA
1966	207,550	45,403	NA	NA
1967	201,950	36,117	NA	NA
1968	200,700	42,623	NA	NA

The value of engineering contracts awarded (which excludes private residential construction) does not correspond to work in progress, and therefore cannot be used to explain year-to-year variation in construction employment. But this series does provide a gauge of the relative importance of government versus private industrial and commercial construction. In all years except 1952 the value of public works contracts far exceed that of private industry. If the numbers are at all comparable, the public works and highways construction total is many times that of private plants and facilities. For example, in 1959 public works contracts awarded and Federal Aid Highway projects amounted to $137,922,000, compared to $14,029,000 of private industrial and commercial contracts awarded. Thus, if the information is correct, the growth of construction in Montana does not reflect a growing private economy.

In a state as small as Montana, peaks in construction employment may be caused by individual projects. For example, the peaks in 1959 and 1962 correspond with the construction of ore reduction facilities in Butte and missile silos along the High Line.[11] On the other hand, the Libby Dam, one of the largest construction projects ever undertaken in the state, did not seem to have much impact on total construction employment in 1967 and 1968.

Figure 14 indicates that for most of the 19-year period the Montana construction industry had a smaller share of total employment than its counterpart in the Rocky Mountain states, but more than the United States.

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11. This refers to only the construction of silos. Missile assembly was assigned to the manufacturing category discussed previously.

The nationwide construction boom of the late fifties and early sixties is reflected by the increased share of total employment in this industry in all three regions. Then, in 1962 for Montana and the Rocky Mountain region, and in 1967 for the nation, the pace slackened and the construction industry began to lose its share of total employment.

Figure 13 shows how construction employment in Montana is divided among building construction, other than building construction--essentially highway and heavy construction, and special trades--including plumbing, electrical work, and the like. The other than building classification increased sharply in relative importance beginning in 1960--roughly corresponding with the advent of the interstate highway projects. Special trade construction, after an initial increase in the middle and late fifties, maintained its relative position. The relative decline in building construction has mirrored the increase in the importance of other than building construction.

To summarize, the overall growth rate of construction employment in Montana has been below that of the nation and the Rocky Mountain states. Although the data is sketchy, most construction activity in the state is probably the result of government action rather than increases in the plant and facilities of the private sector. The relative importance of other than building construction gives some support to this notion. Finally, the information available is not sufficient to determine if the cyclical variations in Montana construction employment are due to national or local causes.

E. Transportation, Communication, and Utilities

Montana employment in transportation, communication, and utilities is difficult to analyze because it is next to impossible to divide the output of this industry into that part which is consumed in the state and that which is exported. On one hand, Montana's geographic position, between the populous East and the growing Northwest, means that it is a conduit for a substantial flow of goods. To the extent that this is true, employment is located in Montana simply out of geographical necessity. However, at the same time that these services are provided for the rest of the nation, Montanans are also served by the transportation and communication facilities located within its boundaries. Finally, and this is especially true for communication and utilities, the services provided to Montanans are essentially identical to those provided elsewhere in the nation. For example, the operation of a telephone company in Montana is probably not too different from that in Iowa. Thus, one would expect that because (1) facilities within Montana are part of a national network and (2) are essentially identical to those elsewhere, Montana employment in the transportation, communication and utilities industry will reflect national and industrywide trends more than technological and policy developments unique to this state. Also, because the export and domestic sectors cannot be separated, it is difficult to estimate the resulting change of services provided to Montanans.

Figure 18 pictures the fact that Montana has experienced a greater decrease of employment in transportation, communication, and utilities than the Rocky Mountain states or the United States. In general, the railroads have been responsible for most of the national employment

declines in this industry during the 1950-1968 period. Thus, Montana, which has a large number of railroad jobs, could be expected to show the largest decreases.

Since the 1880s the railroad has been the dominant form of transportation in Montana. Even today, as is demonstrated by figure 16, railroads are the largest employer in the transportation, communication, and utilities industry. After World War II the railroads underwent a significant transformation. Passenger service was cut drastically and administrative restructuring, along with a high rate of capital investment, was undertaken in order to improve their profit position. These policies have resulted in industrywide reductions in railroad employment. Proportionately, Montana was particularly hard hit because we had many of the types of jobs, line and small yard, which were especially susceptible to elimination.

For Montana, the largest declines in transportation, communication, and utilities employment occurred in 1954, 1956-1958, and 1960-1964. These occurred in the railroad classification and, since they correspond to similar events in the Rocky Mountain states and the nation, were probably due to the implementation of the aforementioned policies.[12]

One important question, whether this reorganization of the railroads had decreased the transportation services available to Montanans, is left unanswered. It is of vital concern to the future growth of our state that we have an adequate transportation system. However, an examination of the past and present performance of the railroads, and other forms of transportation, is far beyond the scope of this study. But it should be

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12. See Appendix tables A and B.

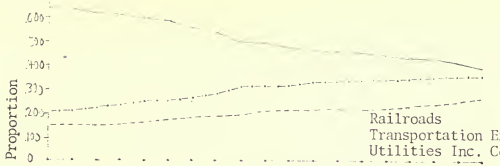

Figure 16. Montana Transportation and Utilities Composition

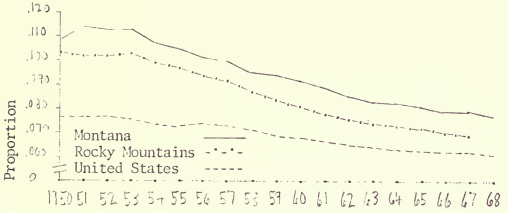

Figure 17. Transportation, Communication, and Utilities as a Proportion of Total Employment

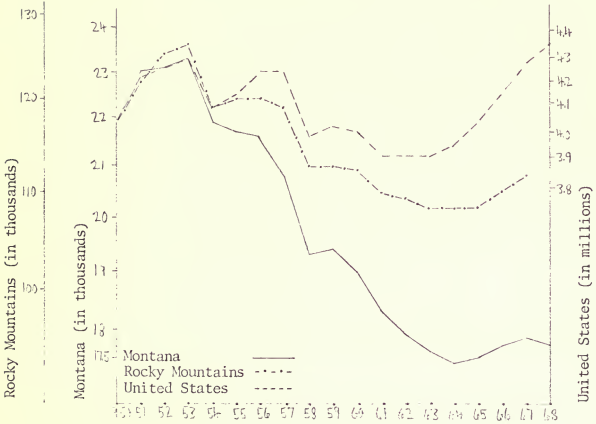

Figure 18. Total Transportation, Communication, and Utilities as a Proportion of Total Employment

remembered that the decline in railroad employment in Montana (1) is part of a nationwide phenomenon and (2) to the extent that it relates to through traffic, overestimates the decrease in services available to Montanans.

The other classifications in this industry, transportation except railroads, communication, and utilities, have a growth rate greater than the average for all Montana industries. Once again, interpretation is difficult. This growth could indicate a higher level of services to Montanans, or it could simply reflect increases in the interstate facilities located in the state.

Figure 17 may be used to obtain a rough estimate of the extent to which Montana employment in transportation, communication, and utilities depends upon national traffic. If Montana received the same relative amount of transportation and communication services as the nation, and labor were equally efficient in both, one would expect this state and the United States to have the same proportion of the labor force in this industry. Any excess of relative Montana employment may be assigned to the national traffic which simply passes through the state. Figure 17 shows that Montana consistently has about one and one-half times the national relative employment in the transportation, communication, and utilities industry. This could lead to the conclusion that a considerable proportion of the Montana employment in this industry is not concerned with providing services to Montanans.[13]

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13. The extremely tentative nature of this conclusion cannot be over-emphasized. Considering just the interstate differences in population density, one would expect Montana to have larger employment in this category.

From 1953 to 1964 the transportation, communication, and utilities industry in Montana experienced absolute declines in employment, although these reductions occurred almost entirely in the railroad classification. The recent upturn in employment is due to the stabilization of the railroads and the growth in communication and utilities. The performance of this industry seems to parallel national trends and its future growth in this state will probably depend on developments outside Montana. However, because of our geographic position, we can always expect to have a relatively large portion of our labor force in this industry.

F. Trade, Service, and Finance, Insurance, and Real Estate

The trade, service, and finance, insurance, and real estate industries have much in common and will be discussed together. In general, employment in these sectors is classified as secondary and is conceived as being dependent upon the existence of other, or primary, industries. This does not imply that they are less important or productive than other forms of employment. Rather, it suggests that a train of causation runs from primary to secondary employment instead of vice versa. For example, a rapid growth in mining can be expected to result in prosperous trade and service industries, while expanding secondary industries will have little effect on primary employment.[14] The exact industries which are classified as primary depend on the type of investigation which is being undertaken.

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14. This train of causation has been developed into a powerful method for analyzing local area employment patterns. The usual procedure is to assume or estimate an exact relationship between primary and secondary employment. Then, a projection of the former will lead to an estimate of future total employment. However, this approach is beyond the scope of this paper. See Charles M. Tiebout, The Community Economic Base Study, Supplementary Paper No. 16, Committee For Economic Development (New York, 1962).

In discussing employment in Montana, it seems most appropriate to include as primary employers agriculture, mining, manufacturing, construction, and the transportation component of the transportation, communication, and utilities classification.

Figures 23 and 26 show that the overall growth rates of the service and trade industries in Montana are below those of the United States and the Rocky Mountain states. This is not surprising in light of the fact that all of our primary industries have also had growth rates below those of the comparison regions.

Employment in finance, insurance, and real estate grew rapidly during the fifties. It is, in fact, the only Montana industry which has had an overall growth rate in excess of its national counterpart. One can only speculate as to the cause of this industry's favorable growth. First of all, the growth in finance, insurance, and real estate may be somewhat misleading because it is small in terms of absolute employment. The opening or expansion of several medium-size firms could explain the large percentage increase.[15] On the other hand, this industry represents a very specialized form of service which may have been tardy in locating in the state. If this is true, the rapid rise of employment may just represent a "catching up" phase of this industry in Montana. In any case, this is certainly a topic which merits further study.

The classification of the trade, service, and finance, insurance, and real estate industries as secondary does not imply that there is a fixed relation between the size of their employment and that in the basic industries. It cannot be said with certainty that one new job in a basic

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15. In fact, the early fifties saw the introduction of small loan companies in Montana in response to the easing of legal restrictions.

industry will lead to the creation of, say, two jobs in secondary employment. In fact, developed areas usually have a faster rate of growth in secondary rather than primary industries. Figures 19, 22, and 25 suggest that this phenomenon is also present in Montana. Between 1950 and 1968 all three industries increased their share of state employment--indicating that they had growth rates greater than the average for all industries in Montana.

Montana's geographic and demographic features a large land area with a small population, may influence employment in trade, service, and finance, insurance, and real estate. The fact that we have a smaller share of state employment in the service and finance, insurance, and real estate industries may be caused by our lack of broad market areas to support specialized services which may be available elsewhere, such as business data processing. However, a geographic explanation does not seem to apply in the case of trade. One would expect that, because of the dispersion of its population, Montana would be served by a number of small establishments rather than a few stores located in the population centers. This, by itself, would imply a relatively large employment in trade. Instead, as the center panel of figure 11 shows, we have approximately the same share of employment in trade as the nation, but less than that of the Rocky Mountain states.

Interstate tourism is often cited as a prime source of Montana employment. The definition of this industry is nebulous and it is next to impossible to combine existing employment classifications into a meaningful aggregate representing the tourist industry. However, hotels, camps, and rooming houses--classified in the service industry--may be grouped with eating and drinking establishments and service stations--classified in retail trade--to form a proxy for tourist employment.

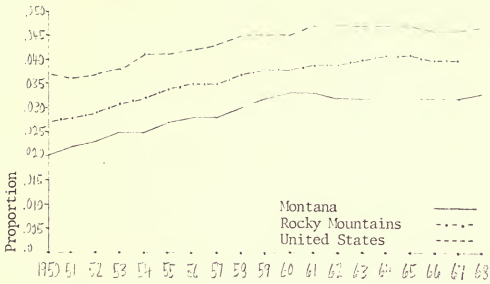

Figure 19. Finance, Insurance, and Real Estate Employment as a Proportion of Total Employment

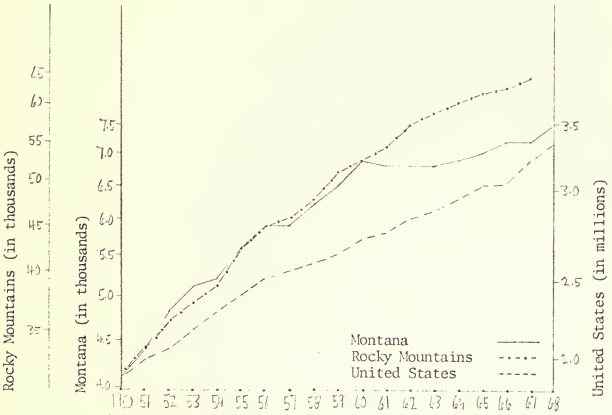

Figure 20. Total Finance, Insurance, and Real Estate Employment

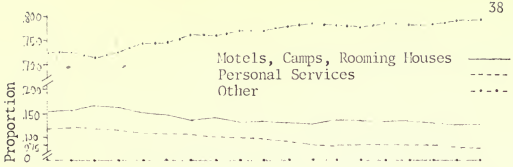

Figure 21. Montana Service Composition

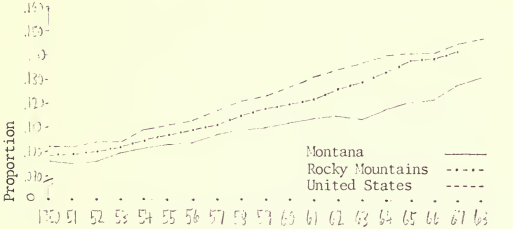

Figure 22. Service Employment as a Proportion of Total Employment

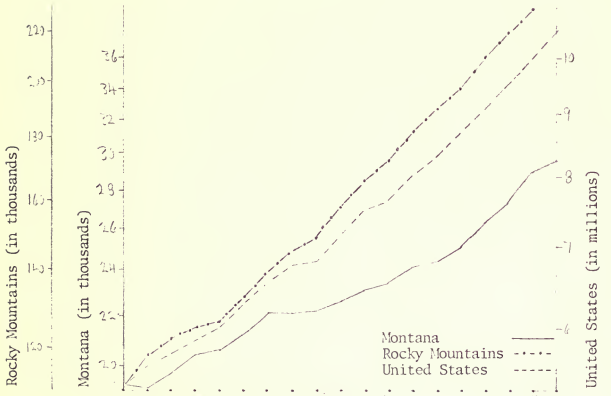

Figure 23. Total Service Employment

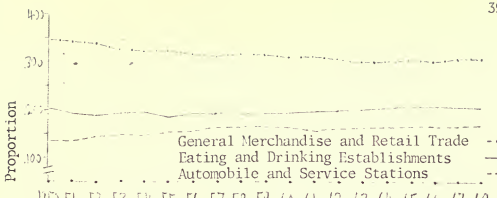

Figure 24. Montana Trade Composition

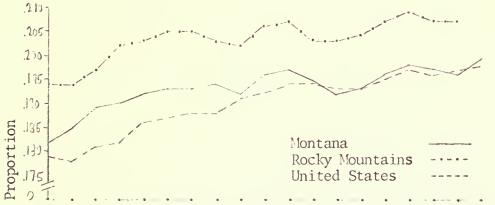

Figure 25. Trade Employment as a Proportion of Total Employment

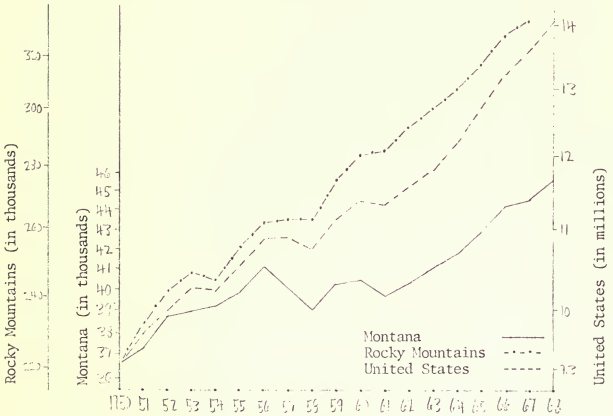

Figure 26. Total Trade Employment

Average rates of growth of employment in these sectors, computed from Appendix A, are greater than the average for total state employment. However, this should not be taken as conclusive evidence of the growing importance of interstate tourism. These same facilities serve Montanans who, because of the distances involved, may do more traveling in order to conduct their day-to-day business.

In summary, the fact that Montana had rates of growth lower than the nation and the Rocky Mountain states in trade and service employment may be caused by our slow growth in the primary industries. On the other hand, the changing demand of consumers may account for the secondary industries growing faster than the average for all industries in the state.

G. Government

Earlier references to the government as the largest single employer in the state no doubt elicited a vision of a gargantuan federal bureaucracy. In fact, the federal civilian employment accounts for less than one person in four classified as government employees in Montana. Figure 27 demonstrates that employment by local government units is by far the largest. Thus, when one speaks of government employment in Montana, he refers not so much to a federal bureaucrat as to a local schoolteacher or policeman.

The overall growth of government employment in Montana has been slightly below that of the United States and considerably lower than in the Rocky Mountain states. But, with the exception of the early fifties, the growth of employment at all three levels of government has been persistent and free from fluctuations. The only noticeable trend has been an acceleration of the growth rates beginning about 1966.

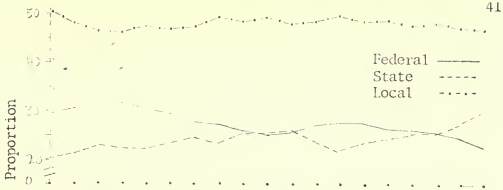

Figure 27. Montana Government Composition

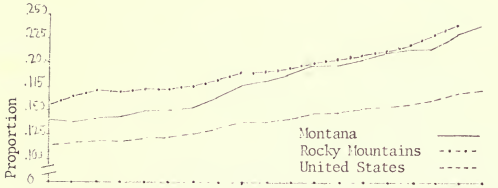

Figure 28. Government Employment as a Proportion of Total Employment

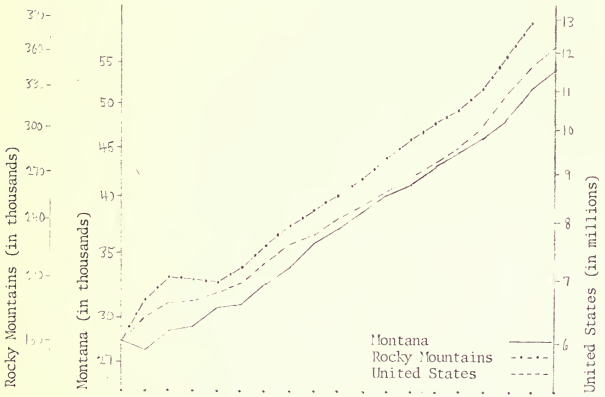

Figure 29. Total Government Employment

The growth in federal government employment often provokes strong reactions. Figure 31 places Montana federal employment in perspective. Overall, its growth has not been markedly different from that in the nation or the Rocky Mountain states. From 1950 to 1959 Montana lagged behind the two comparison regions. Beginning in 1960, our growth rate exceeded the nation's but did not equal that of the Rocky Mountain states. Figure 30 shows that only between 1959 and 1962 did the share of federal employment in total state employment increase noticeably. For most of the period, this sector did little more than keep pace with the rest of the state's economy.

Figure 30 also shows that Montana has a larger proportion of federal employment than the nation, but less than the Rocky Mountain states. This may surprise those who expected federal presence in forest and recreation management would result in Montana having more than its share of federal employees. But the large bureaus associated with urban problems and the regional government headquarters are located elsewhere, such as the IRS center in Salt Lake City.

The rapid postwar growth of government employment has not, as we have seen, been at the federal level but from the increasing importance of state and local government. Figure 34 shows that, in the government employment category, not only Montana but the rest of the nation and the Rocky Mountain region have experienced consistent and robust rates of growth. Montana's growth slowed slightly in the early sixties but then regained its earlier rate so that, overall, state and local government employment increased at an average rate of 4.3 percent a year, the highest for any of our state's industries. State and local

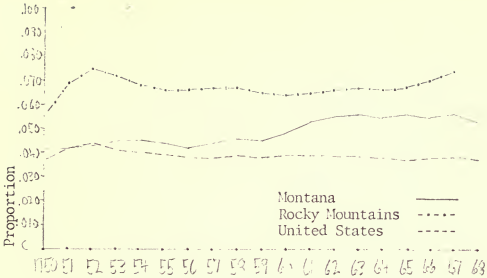

Figure 30. Federal Government Employment as a Proportion of Total Employment

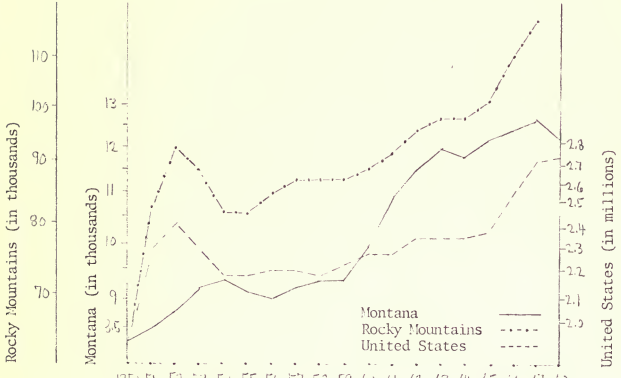

Figure 31. Total Federal Government Employment

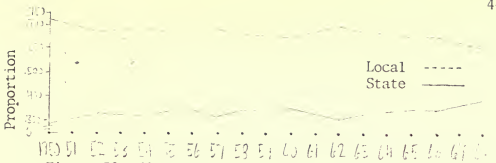

Figure 32. Montana State and Local Government Composition

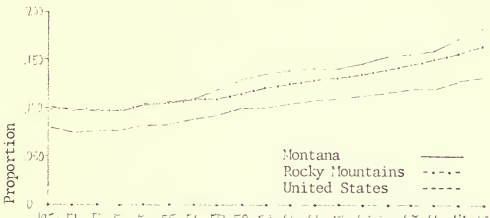

Figure 33. State and Local Government Employment as a Proportion of Total Employment

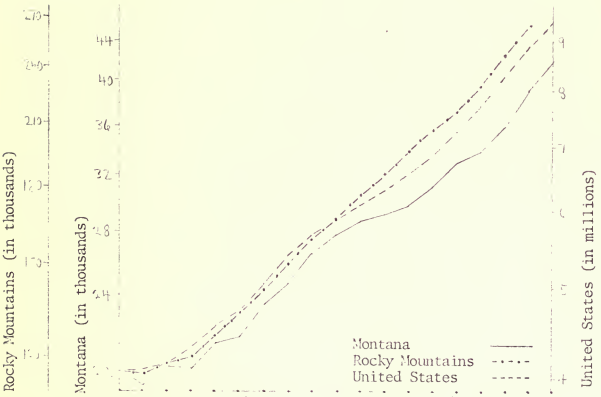

Figure 34. Total State and Local Government Employment

government employment increased its share of total employment in Montana from 10 percent in 1950 to over 18 percent by 1968. The upward trends in the Rocky Mountain states and the nation indicate that we are not alone in having a relatively rapid rise in the importance of state and local governments.

Figure 33 shows that Montana consistently has a much greater proportion of its labor force employed by state and local government than does the United States. Once again, our geography may be to blame. The manpower requirements of many government services are fixed by administrative unit, for example, one sheriff per county. Our small and widely dispersed population, and large number of local governmental units may thus require proportionately larger government employment. Moreover, distances per se involve manpower costs. For example, one would expect that Montana has more schoolbus drivers per capita than, say, Rhode Island.

Figures 35-38 use the partial information available to analyze state and local governments separately. In Montana, both levels of government have proportionately larger employment than their counterparts in the nation. This is additional evidence that geography is a cause of our relatively large government sector. Unfortunately, equivalent data is not available for the Rocky Mountain states, which are in many ways similar to Montana.

In summary, government has been the fastest growing industry, in terms of employment, in Montana, the Rocky Mountain states, and the nation. Most of the increases stem not from the federal but state and local level. Montana has a larger proportion of total employment in state and local government than the United States or the Rocky Mountain

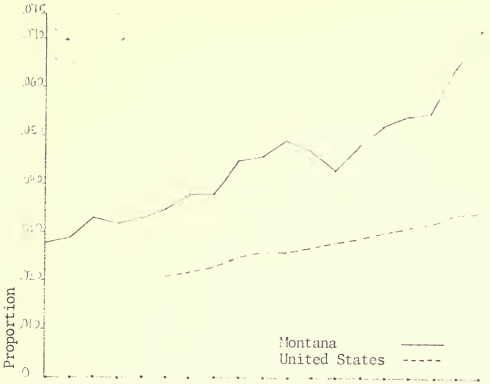

Figure 35. State Government Employment as a Proportion o
of Total Employment

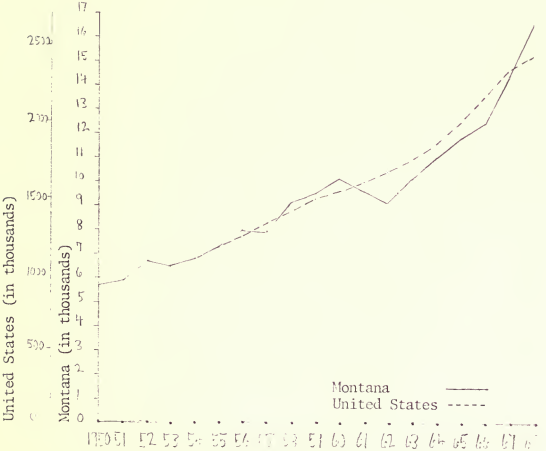

Figure 36. Total State Government Employment

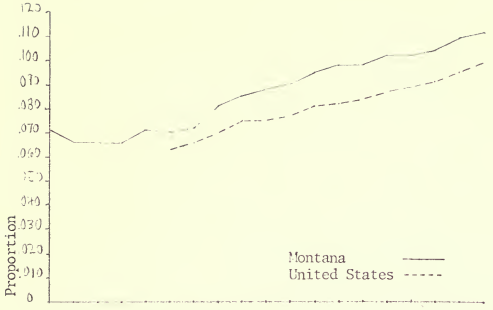

Figure 37. Local Government Employment as a Proportion of the Total for Montana and the United States

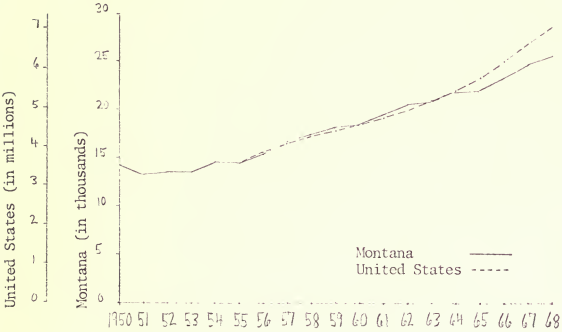

Figure 38. Local Government Employment since 1950 for Montana and the United States

states. Some of this abundance, at least relative to the nation, may be due to our large land area and sparse population.

H. Total Employment Once Again

Earlier in this paper it was noted that the growth rate of employment in Montana has been consistently below that of the Rocky Mountain and the United States. Examination of each industry group in detail indicated that the blame could not be placed on one sector. Of all the Montana industries only finance, insurance, and real estate had a higher rate of employment growth than its national counterpart.[16] No industry in Montana equaled the growth of its corresponding industry in the Rocky Mountain states. Simply put, the lackluster performance of Montana employment is due to the slow growth of all our industries.

The relative importance of the industry groups in 1950 and their average rates of growth for Montana, the Rocky Mountain states, and the nation are presented in table 4. It can be seen that the three slowest growing industries in the United States, agriculture, mining, and transportation, communication and utilities, are relatively more important in Montana than in the nation. This suggests that even if each Montana industry grew at a rate equal to its national average, our growth rate would still be below that of the United States because we have such a disproportionately large number of workers in industries which have generally low growth rates. Thus, Montana has a lower growth rate of employment than the nation because (1) most of our industries are growing at slower

16. Agricultural employment decreased at a lower rate in Montana than in either comparison region. Thus, technically speaking, Montana agriculture "grew" faster than the others.

TABLE 4

Relative Importance and Average Growth Rates of Industry Groups:
Montana, United States, and the Rocky Mountain States

	Montana		United States		Rocky Mountain States	
	Relative Importance in 1950	Average 1950-68 Annual Growth Rate (Percent)	Relative Importance in 1950	Average 1950-68 Annual Growth Rate (Percent)	Relative Importance in 1950	Average 1950-68 Annual Growth Rate (Percent)
Agriculture	.262	-2.4	.139	-4.5	.206	-2.5
Manufacturing	.089	1.5	.290	1.5	.120	2.8
Mining	.051	-3.1	.017	-2.0	.041	-.7
Contract construction	.052	.8	.044	2.0	.054	1.3
Transportation, communication, and utilities	.109	-1.1	.077	.5	.103	-.3
Trade	.182	1.2	.179	2.3	.194	2.4
Service	.096	2.5	.102	3.8	.098	4.3
Finance, insurance and real estate	.020	3.5	.037	3.2	.027	4.3
Government	.140	3.7	.115	4.0	.157	4.6

Source: Computed from Appendix tables A, B, and C.

rates than their national counterparts and (2) we have a large proportion of our employment in industries which, on the national level, have a poor record of growth.

A slightly more complicated approach may be used to gauge the exact influence of the perverse industrial composition and slower growth rates of employment growth in Montana. Specifically, a hypothetical estimate of employment in Montana for 1968 may be obtained by assuming that we had the same relative importance of industries in 1950 as the nation and that each industry grew at its national rate. In other words, what would be the employment in Montana if we were simply a miniature of the nation? In a similar manner, another hypothetical 1968 employment can be calculated predicated on our having either the same composition as the nation in 1950 or industry growth rates equal to their national average. These estimates are presented as entries (1), (2), and (3) in table 5. Subtracting (1) from (3) we obtain the effect on employment of the difference in the growth rates between Montana industries and their national counterparts. In a similar way, subtracting (2) from (3) isolates the influence of differing industrial composition.[17] The fact that the differences are negative confirms the notion that both a perverse industry-mix and lower growth rates have had a retarding affect on the overall growth of employment in Montana. In other words, 1968 employment in Montana would be 38,100 higher if we had the same industrial composition as the nation in 1950 even though, category by category, Montana's industries grew at their

17. Both (1) and (3) were calculated using the industrial composition of the nation. The difference between them must be due to different growth rates in Montana and the United States. Similarly, (2) and (3) used the national growth rates for each industry and the difference must be caused by industries having different relative shares in Montana and the nation.

TABLE 5

Hypothetical Employment in Montana

Hypothetical 1968 Montana employment if Montana:

(1) Had the same industrial composition as the nation (in thousands).....235.9

(2) Industries grew at their national rate (in thousands).....239.4

(3) Had both national industrial composition and industries grown at their national rates (in thousands).....274.0

Difference in hypothetical Montana employments:

(1) Due to difference in industry growth rates (in thousands).....-38.1

(2) Due to difference between industrial structure of Montana and the nation (in thousands).....-34.6

Source: Computed from appendix tables A and B.

actual rate. Similarly, employment would have increased by an additional 34,600 if each of our industries had grown at the same rate as their national counterparts, even given the fact that Montana's employment is concentrated in slow-growth industries.

This analysis demonstrates the fallacy of thinking that Montana's persistent deficiency in employment growth may be alleviated if we could only induce a faster rate of growth in each of our industries. Our distribution of employment, or industrial composition, is biased toward slow-growing industries. In other words, the major industries of our state, particularly agriculture, are those whose demand for additional workers has not grown rapidly.

IV. CONCLUSION

This paper has painted a very gloomy picture of Montana. On every front we are losing ground in employment growth relative to the nation and the Rocky Mountain states. However, a very important aspect--the welfare of Montanans--has been ignored. It does not follow that an increase in the welfare of Montanans, measured by per capita income or some other indicator, would be obtained by increasing an aggregate, such as employment. In fact, increasing the welfare of the residents of our state may require a lower growth rate of employment relative to the nation. In any case, this aspect is left to other papers in this series. This study has been concerned only with the simple facts of employment growth in Montana with no emphasis on the welfare implications.

APPENDIX

TABLE A

Montana Employment by Industry (in thousands)

	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
1. Total employment	201.8	201.7	204.8	205.4	204.4	206.3	213.0	207.3	203.6	205.7
2. Agriculture	52.8	50.7	49.5	48.9	47.2	44.2	44.4	42.5	41.2	40.6
3. Self-employed family	37.8	35.5	34.6	34.3	32.0	29.9	30.2	27.8	27.1	26.7
4. Hired workers	15.0	15.2	14.9	14.6	15.2	14.3	14.2	14.7	14.1	13.9
5. Nonagricultural wage and salary	149.0	151.0	155.3	156.5	157.2	162.1	168.6	164.8	162.4	165.1
6. Manufacturing	18.0	18.1	18.0	18.3	18.3	20.4	21.2	20.4	20.2	19.9
7. Durable goods	10.5	10.8	10.6	10.6	10.6	12.7	13.5	12.7	12.2	12.1
8. Lumber and timber products	5.4	6.1	5.9	5.8	6.1	7.1	7.6	6.6	6.6	7.5
9. Primary metals	4.0	3.6	3.6	3.6	3.3	4.3	4.6	4.8	4.2	3.1
10. Other	1.1	1.1	1.1	1.2	1.2	1.3	1.3	1.3	1.4	1.5
11. Nondurables	7.5	7.3	7.4	7.7	7.7	7.7	7.7	7.7	8.0	7.8
12. Food and kindred products	4.2	4.2	4.1	4.0	3.9	3.9	3.9	3.9	4.3	4.3
13. Printing and publishing	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.7	1.7
14. Petroleum refining	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.0	.9
15. Other	.6	.4	.6	1.0	1.0	1.0	1.0	1.0	1.0	.9
16. Nonmanufacturing	131.0	132.9	137.3	138.2	138.9	141.7	147.4	144.4	142.2	145.2
17. Mining	10.2	10.5	11.4	11.6	10.7	12.0	12.4	10.8	8.7	7.8
18. Metal mining	7.8	7.9	8.2	8.2	7.4	8.4	8.7	7.5	5.4	4.6
19. Coal and quarry	1.2	1.2	1.1	1.0	.9	.9	.9	.8	.8	.7
20. Petroleum and natural gas	1.2	1.4	2.1	2.4	2.4	2.7	2.8	2.5	2.5	2.5
21. Other	---	---	---	---	---	---	---	---	---	---

Sources: Rows 1, 2, 3, 4, and 47-50 estimated by author.

All other rows, 1965-1968: U.S. Department of Labor, Bureau of Employment Security, and Manpower Administration, Montana Annual Statewide Work Force Report.

All other rows, 1950-1964: U.S. Department of Labor, Bureau of Labor Statistics, Employment and Earnings Statistics for States and Areas 1939-1967 (Washington, D.C.: U.S. Government Printing Office, 1968).

TABLE A (Continued)

		1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
22.	Contract construction	10.5	10.6	10.5	9.5	10.6	10.4	11.7	10.8	10.9	11.6
23.	Building construction	4.1	3.9	3.6	3.8	4.4	4.2	4.3	3.7	3.9	4.6
24.	Other than building construction	3.5	3.8	4.2	2.9	3.1	2.8	3.8	3.4	3.2	3.0
25.	Special trade	2.9	2.9	2.7	2.8	3.1	3.4	3.6	3.7	3.8	4.0
26.	Transportation and utilities	21.9	23.0	23.1	23.3	21.9	21.7	21.6	20.8	19.3	19.4
27.	Railroads	14.0	14.5	14.3	14.2	13.0	12.6	12.0	11.2	9.6	9.4
28.	Transportation except railroads	3.3	3.5	3.5	3.6	3.5	3.7	3.9	3.8	3.7	4.0
29.	Utilities including communication	4.6	5.0	5.3	5.5	5.4	5.4	5.7	5.8	6.0	6.0
30.	Trade	36.7	37.4	38.7	39.0	39.2	39.9	41.2	40.2	39.1	40.3
31.	Wholesale	7.8	8.3	8.4	8.7	8.8	8.9	9.0	8.6	8.2	8.5
32.	Retail	28.9	29.1	30.3	30.3	30.4	31.0	32.2	31.6	30.9	31.8
33.	General merchandise and apparel	6.0	6.2	6.2	6.2	6.2	6.2	6.3	6.0	5.8	5.8
34.	Food stores	3.8	4.0	4.3	4.3	4.4	4.5	4.8	4.8	4.6	4.8
35.	Eating and drinking places	7.4	7.2	7.3	7.5	7.6	7.5	7.9	7.7	7.5	7.7
36.	Auto and service stations	5.0	5.1	5.6	5.8	5.8	6.1	6.4	6.6	6.4	6.6
37.	Retail trade and miscellaneous	6.7	6.6	6.9	6.5	6.4	6.7	6.8	6.5	6.6	6.9
38.	Other	---	---	---	---	---	---	---	---	---	---
39.	Service	19.3	19.2	19.7	20.4	20.6	21.2	22.2	22.1	22.2	22.6
40.	Hotels, camps, and rooming houses	3.0	3.0	3.3	3.3	3.1	3.1	3.0	3.1	2.9	3.0
41.	Personal service	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.2	2.2	2.2
42.	Other	14.0	13.9	14.1	14.8	15.3	15.8	16.9	16.8	17.1	17.4
43.	Finance, insurance, and real estate	4.1	4.4	4.8	5.1	5.2	5.6	5.9	5.9	6.2	6.5
44.	Government	28.3	27.8	29.1	29.3	30.7	30.9	32.4	33.8	35.8	37.0
45.	Federal	8.3	8.5	8.8	9.2	9.3	9.1	9.0	9.2	9.3	9.3
46.	State and local	20.0	19.3	20.3	20.1	21.4	21.8	23.4	24.6	26.5	27.7
47.	State	5.7	5.9	6.7	6.5	6.8	7.3	8.0	7.9	9.1	9.5
48.	Local	14.3	13.4	13.6	13.6	14.6	14.5	15.4	16.7	17.4	18.2
49.	School	7.5	7.1	7.3	7.0	7.5	7.5	8.2	9.5	9.9	10.4
50.	Nonschool	6.8	6.3	6.3	6.6	7.1	7.0	7.2	7.2	7.5	7.8

TABLE A (Continued)

	1960	1961	1962	1963	1964	1965	1966	1967	1968
1. Total employment	206.0	204.5	210.0	212.6	213.0	216.7	224.1	226.6	299.0
2. Agriculture	39.2	37.4	38.3	38.0	36.8	35.4	37.4	36.4	33.7
3. Self-employed family	25.0	24.6	24.5	24.0	23.6	22.8	22.1	20.3	19.7
4. Hired workers	14.2	12.8	13.8	14.0	13.2	12.6	15.3	16.1	14.0
5. Nonagricultural wage and salary	166.8	167.1	171.7	174.6	176.2	181.3	186.7	190.2	195.3
6. Manufacturing	20.4	20.4	22.0	22.4	21.5	22.2	23.0	22.4	23.3
7. Durable goods	12.7	12.7	14.3	14.5	13.4	14.2	14.9	14.3	15.2
8. Lumber and timber products	7.3	7.4	8.0	8.5	8.4	8.6	8.9	8.7	9.0
9. Primary metals	3.8	3.6	3.5	3.2	3.3	3.6	3.9	3.2	3.7
10. Other	1.6	1.7	2.8	2.8	1.7	2.0	2.1	2.4	2.5
11. Nondurables	7.7	7.7	7.7	7.9	8.1	8.0	8.1	8.1	8.1
12. Food and kindred products	4.3	4.3	4.4	4.4	4.4	4.3	4.3	4.4	4.3
13. Printing and publishing	1.7	1.7	1.6	1.6	1.7	1.7	1.8	1.7	1.7
14. Petroleum refining	.9	1.0	1.0	1.2	1.2	1.1	1.0	1.0	1.1
15. Other	.8	.7	.7	.7	.8	.9	1.0	1.0	1.0
16. Nonmanufacturing	146.4	146.7	149.7	152.2	154.7	159.1	163.7	167.8	172.0
17. Mining	7.4	7.1	6.8	7.1	7.6	7.5	7.6	5.9	5.3
18. Metal mining	4.5	4.2	3.8	4.1	4.8	4.6	4.8	3.2	2.3
19. Coal and quarry	.7	.7	.8	.9	.9	1.1	1.1	1.0	1.0
20. Petroleum and natural gas	2.2	2.2	2.2	2.1	1.9	1.8	1.7	1.7	2.0
21. Other	---	---	---	---	---	---	---	---	---
22. Contract construction	11.0	11.3	12.6	12.3	11.4	12.0	11.6	11.7	11.7
23. Building construction	4.3	3.4	3.4	4.2	3.7	3.3	3.1	3.7	2.9
24. Other than building construction	2.8	4.0	4.7	4.1	4.1	4.5	4.3	4.1	4.8
25. Special trade	3.9	3.9	4.5	4.0	3.6	4.2	4.2	3.9	4.0

TABLE A (Continued)

		1960	1961	1962	1963	1964	1965	1966	1967	1968
26.	Transportation and utilities	19.0	18.3	17.9	17.6	17.4	17.5	17.7	17.8	17.7
27.	Railroads	9.0	8.4	8.1	7.9	7.7	7.5	7.5	7.2	6.9
28.	Transportation except railroads	4.0	3.9	3.9	3.8	3.8	4.0	4.1	4.4	4.6
29.	Utilities including communication	6.0	6.0	5.9	5.9	5.9	6.0	6.1	6.2	6.2
30.	Trade	40.5	39.8	40.3	41.1	41.7	42.9	44.2	44.5	45.6
31.	Wholesale	8.7	8.5	8.5	8.6	8.6	8.8	9.0	8.8	9.1
32.	Retail	31.8	31.3	31.8	32.5	33.1	34.1	35.2	35.7	36.5
33.	General merchandise and apparel	5.9	6.0	6.1	6.2	6.2	6.5	6.5	6.5	6.6
34.	Food stores	4.9	4.9	5.0	5.2	5.3	5.3	5.5	5.6	5.5
35.	Eating and drinking places	7.8	7.8	8.0	8.2	8.5	8.7	9.1	9.1	9.3
36.	Auto and service stations	6.6	6.3	6.5	6.8	6.8	7.1	7.3	7.4	7.7
37.	Retail trade and miscellaneous	6.6	6.3	6.2	6.1	6.3	6.5	6.8	7.1	7.4
38.	Other	---	---	---	---	---	---	---	---	---
39.	Service	23.1	23.4	24.1	24.3	25.1	26.3	27.3	28.9	30.0
40.	Hotels, camps, and rooming houses	3.0	3.0	3.3	3.3	3.3	3.5	3.6	3.7	3.8
41.	Personal service	2.1	2.0	2.0	2.1	2.1	2.2	2.3	2.3	2.4
42.	Other	18.0	18.4	18.8	18.9	19.7	20.6	21.4	22.9	23.8
43.	Finance, insurance, and real estate	6.9	6.8	6.8	6.8	6.9	7.0	7.2	7.2	7.5
44.	Government	38.5	40.0	41.2	43.0	44.6	45.9	48.1	51.8	54.2
45.	Federal	9.9	10.9	11.5	12.0	11.8	12.1	12.4	12.7	12.2
46.	State and local	28.6	29.1	29.7	31.0	32.8	33.8	35.7	39.1	42.0
47.	State	10.1	9.6	9.1	10.1	11.0	11.8	12.4	14.4	16.5
48.	Local	18.5	19.5	20.6	20.9	21.8	22.0	23.3	24.7	25.5
49.	School	10.7	11.3	12.4	12.7	13.4	13.4	13.9	14.9	15.2
50.	Nonschool	7.8	8.2	8.2	8.2	8.4	8.6	9.4	9.8	10.3

APPENDIX

TABLE B

Industrial Employment for the United States (in thousands)

	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
1. Total employment	52,514	54,758	55,346	56,348	54,985	56,354	57,635	57,881	56,245	58,014
2. Agriculture	7,292	6,909	6,521	6,216	5,962	5,680	5,227	4,986	4,877	4,699
3. Self-employed family	5,319	5,006	4,690	4,433	4,204	3,959	3,590	3,375	3,224	3,074
4. Hired workers	1,973	1,903	1,831	1,783	1,758	1,721	1,637	1,611	1,653	1,625
5. Nonagricultural wage and salary	45,222	47,849	48,825	50,132	49,023	50,674	52,408	52,895	51,368	53,315
6. Manufacturing	15,241	16,393	16,633	17,448	16,314	16,881	17,243	17,175	15,946	16,676
7. Durable goods	8,094	9,089	9,349	10,010	9,129	9,541	9,854	9,856	8,830	9,373
8. Lumber and timber products	808	840	790	771	708	740	731	655	615	659
9. Primary metals	1,247	1,364	1,282	1,383	1,219	1,322	1,355	1,355	1,154	1,183
10. Other	6,039	6,885	7,277	7,856	7,202	7,479	7,748	7,846	7,061	7,531
11. Nondurables	7,147	7,304	7,284	7,438	7,185	7,340	7,409	7,319	7,116	7,303
12. Food and kindred products	1,790	1,823	1,828	1,839	1,818	1,825	1,842	1,805	1,773	1,790
13. Printing and publishing	748	768	780	803	814	835	862	870	873	889
14. Petroleum refining	218	231	235	241	238	238	236	232	224	216
15. Other	4,391	4,482	4,441	4,555	4,315	4,442	4,469	4,412	4,246	4,408
16. Nonmanufacturing	29,981	31,456	32,192	32,684	32,709	33,793	35,165	35,720	35,422	36,639
17. Mining	901	929	898	866	791	792	822	828	751	732
18. Metal mining	97	101	100	106	99	102	109	111	93	84
19. Coal and quarry	463	474	432	395	334	327	344	344	308	299
20. Petroleum and natural gas	266	284	303	311	318	332	340	344	328	350
21. Other	75	70	63	54	40	31	29	29	22	19

Sources: Rows 2, 3, and 4 are estimated by author.

All other rows: U.S. Department of Labor, Bureau of Labor Statistics, Employment and Earnings Statistics for the United States 1909-1967 (Washington, D.C.: U.S. Government Printing Office, 1968).

TABLE B (Continued)

		1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
22.	Contract construction	2,333	2,603	2,634	2,623	2,612	2,802	2,999	2,923	2,778	2,960
23.	Building construction	875	991	983	969	937	997	1,075	987	893	959
24.	Other than building construction	419	462	481	480	471	484	557	576	665	587
25.	Special trade	1,039	1,150	1,170	1,174	1,204	1,321	1,367	1,360	1,220	1,414
26.	Transportation and utilities	4,034	4,226	4,248	4,290	4,084	4,141	4,244	4,241	3,976	4,011
27.	Railroads	1,391	1,449	1,400	1,377	1,215	1,205	1,190	1,121	957	925
28.	Transportation except railroads	NA	NA	NA	NA	NA	NA	NA	NA	1,524	1,637
29.	Utilities including communication	NA	NA	NA	NA	NA	NA	NA	NA	1,495	1,449
30.	Trade	9,386	9,742	10,004	10,247	10,235	10,535	10,858	10,886	10,750	11,129
31.	Wholesale	2,518	2,606	2,687	2,727	2,739	2,795	2,884	2,893	2,848	2,947
32.	Retail	6,868	7,136	7,317	7,520	7,496	7,740	7,974	7,993	7,902	8,182
33.	General merchandise and apparel	1,965	2,006	2,035	2,043	1,991	2,028	2,066	2,075	2,065	2,137
34.	Food stores	NA	NA	NA	NA	NA	NA	NA	NA	1,264	1,305
35.	Eating and drinking places	NA	NA	NA	NA	NA	NA	NA	NA	1,529	1,603
36.	Auto and service stations	NA	NA	NA	NA	NA	NA	NA	NA	1,208	1,244
37.	Retail trade and miscellaneous	NA	NA	NA	NA	NA	NA	NA	NA	911	940
38.	Other	NA	NA	NA	NA	NA	NA	NA	NA	925	953
39.	Service	5,382	5,576	5,730	5,867	6,002	6,274	6,536	6,749	6,809	7,130
40.	Hotels, camps, and rooming houses	480	489	503	514	504	508	525	544	527	547
41.	Personal service	NA	NA	NA	NA	NA	NA	NA	NA	877	891
42.	Other	NA	NA	NA	NA	NA	NA	NA	NA	5,405	5,692
43.	Finance, insurance, and real estate	1,919	1,991	2,069	2,146	2,234	2,335	2,429	2,477	2,519	2,594
44.	Government	6,026	6,389	6,609	6,645	6,751	6,914	7,277	7,616	7,839	8,083
45.	Federal	1,928	2,302	2,420	2,305	2,188	2,187	2,208	2,217	2,191	2,233
46.	State and local	4,098	4,087	4,189	4,340	4,563	4,727	5,069	5,399	5,648	5,850
47.	State	NA	NA	NA	NA	NA	1,169	1,250	1,329	1,416	1,484
48.	Local	NA	NA	NA	NA	NA	3,558	3,819	4,070	4,232	4,366
49.	School	NA	NA	NA	NA	NA	1,792	1,928	2,073	2,165	2,250
50.	Nonschool	NA	NA	NA	NA	NA	1,766	1,891	1,997	2,067	2,116

NA = Data not available.

TABLE B (Continued)

	1960	1961	1962	1963	1964	1965	1966	1967	1968
1. Total Employment	58,675	58,452	59,871	60,885	62,272	64,485	67,479	69,257	71,294
2. Agriculture	4,443	4,409	4,276	4,183	3,941	3,652	3,496	3,227	3,148
3. Self-employed family	2,876	2,798	2,672	2,598	2,475	2,266	2,112	2,002	1,939
4. Hired workers	1,567	1,611	1,604	1,585	1,466	1,386	1,384	1,225	1,209
5. Nonagricultural wage and salary	54,232	54,043	55,595	56,702	58,331	60,833	63,983	66,030	68,146
6. Manufacturing	16,795	16,326	16,853	16,996	17,274	18,062	19,186	19,434	19,740
7. Durable goods	9,459	9,070	9,480	9,616	9,816	10,406	11,256	11,422	11,578
8. Lumber and timber products	627	583	589	593	604	607	613	598	602
9. Primary metals	1,231	1,143	1,166	1,172	1,233	1,301	1,345	1,318	1,301
10. Other	7,601	7,344	7,725	7,851	7,979	8,498	9,298	9,506	9,675
11. Nondurables	7,336	7,256	7,373	7,380	7,458	7,656	7,930	8,012	8,162
12. Food and kindred products	1,790	1,775	1,763	1,752	1,750	1,757	1,779	1,785	1,780
13. Printing and publishing	911	917	927	931	952	979	1,022	1,048	1,063
14. Petroleum refining	212	202	195	189	184	183	186	183	187
15. Other	4,423	4,362	4,488	4,508	4,572	4,737	4,943	4,996	5,132
16. Nonmanufacturing	37,437	37,717	38,742	39,706	41,057	42,771	44,797	46,596	48,406
17. Mining	712	672	650	635	634	632	625	616	625
18. Metal mining	94	87	82	78	80	84	86	78	84
19. Coal and quarry	292	267	258	254	252	251	251	251	251
20. Petroleum and natural gas	309	303	298	289	291	287	280	277	280
21. Other	17	15	12	14	11	10	8	10	10
22. Contract construction	2,885	2,816	2,902	2,963	3,050	3,186	3,292	3,203	3,259
23. Building construction	908	875	882	914	949	994	1,047	977	967
24. Other than building construction	586	583	593	599	614	649	674	666	687
25. Special trade	1,391	1,358	1,427	1,450	1,487	1,543	1,571	1,560	1,605

TABLE B (Continued)

		1960	1961	1962	1963	1964	1965	1966	1967	1968
26.	Transportation and utilities	4,004	3,903	3,906	3,903	3,951	4,036	4,151	4,271	4,348
27.	Railroads	885	817	796	772	756	735	718	692	663
28.	Transportation except railroads	1,665	1,643	1,675	1,697	1,732	1,797	1,877	1,964	2,038
29.	Utilities including communication	1,454	1,443	1,435	1,434	1,463	1,504	1,556	1,615	1,647
30.	Trade	11,391	11,337	11,566	11,778	12,160	12,716	13,211	13,613	14,111
31.	Wholesale	3,003	2,993	3,055	3,103	3,189	3,312	3,438	3,539	3,669
32.	Retail	8,388	8,344	8,511	8,675	8,971	9,404	9,773	10,074	10,442
33.	General merchandise and apparel	2,187	2,190	2,249	2,296	2,380	2,514	2,634	2,704	2,795
34.	Food stores	1,359	1,355	1,364	1,383	1,419	1,469	1,538	1,580	1,640
35.	Eating and drinking places	1,654	1,665	1,720	1,748	1,848	1,988	2,064	2,193	2,299
36.	Auto and service stations	1,267	1,260	1,273	1,324	1,367	1,424	1,470	1,492	1,544
37.	Retail trade and miscellaneous	970	970	987	1,004	1,030	1,060	1,105	1,146	1,183
38.	Other	951	904	918	920	927	949	962	959	981
39.	Service	7,423	7,664	8,028	8,325	8,709	9,087	9,545	10,060	10,504
40.	Hotels, camps, and rooming houses	565	577	595	606	636	659	685	696	720
41.	Personal service	894	899	915	931	954	985	1,013	1,024	1,021
42.	Other	5,964	6,188	6,518	6,788	7,119	7,443	7,847	8,340	8,763
43.	Finance, insurance, and real estate	2,669	2,731	2,800	2,877	2,957	3,023	3,102	3,217	3,357
44.	Government	8,353	8,594	8,890	9,225	9,596	10,091	10,871	11,616	12,202
45.	Federal	2,270	2,279	2,340	2,357	2,347	2,377	2,564	2,719	2,737
46.	State and local	6,083	6,315	6,550	6,868	7,249	7,714	8,307	8,897	9,465
47.	State	1,536	1,607	1,669	1,747	1,857	1,996	2,162	2,332	2,439
48.	Local	4,547	4,708	4,881	5,121	5,392	5,718	6,145	6,565	7,026
49.	School	2,369	2,468	2,581	2,738	2,906	3,120	3,419	3,702	4,002
50.	Nonschool	2,178	2,240	2,300	2,383	2,486	2,598	2,726	2,863	3,024

APPENDIX

TABLE C

Industrial Employment for the Rocky Mountain States (in thousands)

	1950	1951	1952	1953	1954	1955	1956	1957	1958
1. Total employment	1,144.6	1,199.4	1,222.8	1,225.0	1,205.1	1,240.1	1,280.0	1,299.9	1,299.5
2. Agriculture	235.2	224.9	215.6	209.2	203.7	195.6	190.5	186.1	184.8
3. Self-employed family	160.4	152.7	147.6	145.4	139.6	132.8	130.0	122.2	121.1
4. Hired workers	74.8	72.2	68.0	63.8	64.1	62.8	60.5	63.9	63.7
5. Nonagricultural wage and salary	909.4	974.5	1,007.2	1,015.8	1,001.4	1,044.5	1,089.5	1,113.8	1,114.7
6. Manufacturing	137.8	150.1	151.1	154.5	150.1	157.5	165.7	168.9	167.1
7. Durable goods	---	---	---	---	---	---	---	---	---
8. Nondurables	---	---	---	---	---	---	---	---	---
9. Mining	47.5	50.6	53.2	54.1	51.7	55.6	58.3	57.4	50.7
10. Contract construction	62.0	69.3	68.0	62.7	62.2	67.7	74.3	77.4	78.8
11. Transportation and utilities	117.4	122.1	125.3	126.7	119.1	120.2	119.8	119.1	112.7
12. Trade	221.5	232.1	241.1	246.9	244.5	253.9	262.1	263.3	262.6
13. Wholesale trade	52.8	56.4	57.4	60.2	61.1	61.9	63.4	64.5	64.0
14. Retail trade	168.7	175.7	183.7	186.7	183.4	192.0	198.7	198.8	198.6
15. Service	112.1	118.2	122.5	124.9	126.7	132.5	139.1	144.9	148.9
16. Finance, insurance, and real estate	31.2	33.2	35.4	37.5	39.1	42.4	44.7	45.8	47.9
17. Government	179.9	198.9	210.6	208.5	208.0	214.7	225.5	237.0	246.0
18. Federal	64.0	82.4	92.3	88.7	81.8	81.6	84.6	86.9	87.2
19. State and local	115.9	116.5	118.3	119.8	126.2	133.1	140.9	150.1	158.8

Sources: Rows 2, 3, and 4 are estimated by author.

All other rows: U.S. Department of Labor, Bureau of Labor Statistics, Employment and Earnings Statistics for States and Areas 1939-1967 (Washington, D.C.: U.S. Government Printing Office, 1968).

TABLE C (Continued)

	1959	1960	1961	1962	1963	1964	1965	1966	1967
1. Total employment	1,336.9	1,373.7	1,408.3	1,444.8	1,467.1	1,480.0	1,509.2	1,571.4	1,608.5
2. Agriculture	178.3	174.3	174.7	174.1	170.2	165.1	157.5	156.4	153.7
3. Self-employed family	115.4	111.0	110.2	110.1	106.0	103.1	96.8	92.3	85.9
4. Hired workers	62.9	63.3	64.5	64.0	64.2	62.0	60.7	64.1	67.8
5. Nonagricultural wage and salary	1,158.6	1,199.7	1,233.6	1,270.7	1,296.9	1,314.9	1,351.7	1,415.0	1,454.8
6. Manufacturing	179.0	192.3	200.6	206.5	208.2	203.3	201.8	215.2	217.6
7. Durable goods	---	---	---	---	122.3	116.7	114.5	123.5	125.1
8. Nondurables	---	---	---	---	85.9	86.6	87.3	91.7	92.5
9. Mining	49.0	48.8	48.1	45.3	43.7	42.3	44.2	44.8	40.9
10. Contract construction	80.6	79.9	84.1	86.6	85.1	83.9	83.8	80.1	75.4
11. Transportation and utilities	112.5	111.8	109.8	109.2	108.3	108.4	108.2	109.9	111.6
12. Trade	275.7	283.8	285.5	293.4	299.8	306.5	315.5	326.8	332.7
13. Wholesale trade	67.3	68.9	69.3	70.9	72.0	72.7	75.3	76.8	77.7
14. Retail trade	208.4	214.9	216.2	222.5	227.8	233.8	240.2	250.0	255.0
15. Service	157.2	165.0	172.2	181.4	189.4	197.4	207.7	218.7	229.1
16. Finance, insurance, and real estate	50.7	52.7	54.4	56.9	58.5	60.3	61.5	62.4	64.1
17. Government	253.9	265.1	278.9	291.4	303.9	312.8	329.0	357.1	383.4
18. Federal	87.1	88.4	93.3	95.8	98.1	97.7	100.8	110.0	118.3
19. State and local	166.8	176.7	185.6	195.6	205.8	215.1	228.2	247.1	265.1